

## AMENDMENTS TO THE CLAIMS

Claim 1 (Original): A wireless communication system for hosting a plurality of processes, each process in said plurality of processes executed in accordance with a communication protocol, the communication protocol including a set of functions, said wireless communication system comprising:

a plurality of application specific instruction set processors (ASISPs), each ASISP capable of executing a subset of said set of functions included in said communication protocol; and

a scheduler connected to said plurality of ASISPs for scheduling said plurality of ASISPs in accordance with a time-slicing algorithm so that each process in said plurality of processes is supported by said wireless communication system.

Claim 2 (Original): The wireless communication system of claim 1 wherein each said ASISP in said plurality of ASISPs further comprises:

an input register for receiving an input program and state associated with a process in said plurality of processes, each instruction in said input program being part of a limited purpose instruction set that supports said subset of functions included in said communication protocol; and

an output register for storing a value that indicates a state of said process after execution of said input program.

Claim 3 (Original): The wireless communication system of claim 2, wherein

said input program is associated with a first process selected from said plurality of processes; and

said time-slicing algorithm includes a step of allocating a selected ASISP in said plurality of ASISPs to said input program for a predetermined period of time.

Claim 4 (Original): The wireless communication system of claim 3 wherein said input program is not interrupted by said scheduler during said predetermined period of time.

Claim 5 (Original): The wireless communication system of claim 3 wherein execution of said input program is completed during said predetermined period of time.

Claim 6 (Original): The wireless communication system of claim 2, wherein said scheduler further includes a synchronization mechanism for synchronizing said plurality of ASISPs, the synchronization mechanism capable of reallocating an ASISP in said plurality of ASISPs from a first input program that is associated with a first process to a second input program that is associated with a second process.



Claim 11 (Original): The wireless communication system of claim 10 wherein said state of said process stored in said output register is stored in a unique segment of said different memory module, the unique segment of said memory module being determined by an identity of said process.

Claim 12 (Original): The wireless communication system of claim 11 wherein said output register is further used to store a process identifier value that provides said identity of said process.

Claim 13 (Original): The wireless communication system of claim 1 wherein said communication protocol is a code division multiple access (CDMA) protocol.

Claim 14 (Original): The wireless communication system of claim 13 wherein said communication protocol is selected from the group consisting of IS-95 CDMA, IS-95B CDMA, CDMA TIA IS2000, TIA IS 2000A, wideband CDMA (WCDMA), cdma2000, and ARIB WCDMA.

Claim 15 (Original): The wireless communication system of claim 1 wherein said communication protocol is a time division multiple access (TDMA) protocol.

Claim 16 (Original): The wireless communication system of claim 15 wherein said communication protocol is IS-136 TDMA.

Claim 17 (Original): The wireless communication system of claim 1 wherein said ASISP is a finger ASISP and said subset of functions comprises a delay lock loop (DLL) and a channel estimation.

Claim 18 (Original): The wireless communication system of claim 1 wherein said ASISP is a combiner ASISP and said subset of functions comprises a frequency error estimation, a finger energy estimation, and a signal-to-interference (SIR) estimation.

Claim 19 (Original): The wireless communication system of claim 1 wherein each process in said plurality of processes is an echo.

Claim 20 (Original): The wireless communication system of claim 1 wherein each process in said plurality of processes uniquely corresponds to a different mobile hosted by said wireless

















Claim 44 (Previously Presented): The method of claim 31 wherein each process in said plurality of processes is an echo.

Claim 45 (Previously Presented): The method of claim 31 wherein each process in said plurality of processes uniquely corresponds to a different mobile hosted by said wireless communication system and each said process combines a plurality of echoes associated with the corresponding different mobile.

Claim 46 (Previously Presented): The method of claim 31 wherein each said ASISP in said plurality of ASISPs is capable of executing said subset of said set of functions on a time-scale of about 400 to about 5,000 times per second.

Claim 47 (Previously Presented): The method of claim 31 wherein each said ASISP in said plurality of ASISPs further comprises:

an input register for receiving an input program associated with a process in said plurality of processes, each instruction in said input program being part of a limited purpose instruction set that supports said subset of functions included in said communication protocol; and

each instruction in said limited purposed instruction set includes an arithmetic logic unit field, a load field, and a load/store field.